INTEROFFICE MEMORANDUM
Transportation Division

Clark County, Washington
Department of Public Works

TO: Michael Mabrey

FROM: Ejaz Khan, P.E.; Traffic Engineer EK

DATE: December 27, 2013

SUBJECT: Berry Road Quarry Overlay District.

I have evaluated the Berry Road corridor east of NE 240th Avenue for gravel truck traffic safety and operations. Berry Road is a two lane paved roadway with total pavement width ranging between 23 feet and 26 feet. The entire corridor has significant horizontal and vertical curves, steep grades and combination horizontal and vertical curves. The corridor is centerline stripped up to Kaskilla, a distance of approximately 1.5 miles. East of Kaskillah the road width narrows down to approximately 18 feet and is not stripped. Berry Road is a low volume road and carries an estimated traffic volume of 125 vehicles per day. Crash data indicate two crashes over the length of the corridor over a period of five years. The sample size is too small to make a conclusive determination over regarding the safety record of the corridor.

Visual assessment of the pavement condition indicates the pavement to be in poor condition. Guardrails along the corridor are installed against the edge of the travelled way with no shy distance. Vehicles appeared to have sideswiped against the guardrail. The entire corridor is windy with sharp curves. The terrain severely limits the sight distance of oncoming vehicles at various locations throughout the corridor.

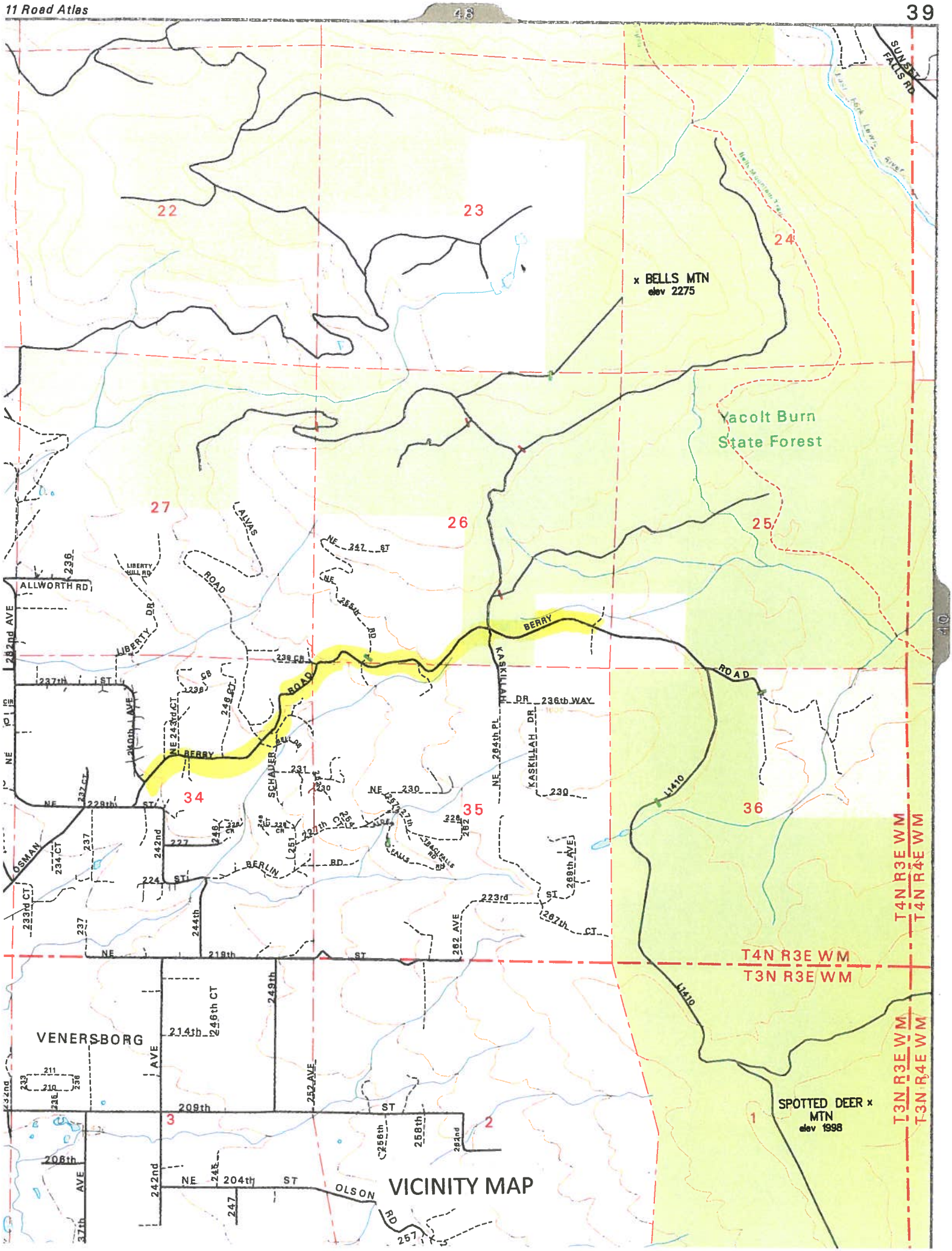
**Conclusion:**

From traffic safety and operations point of view, a large truck with trailer travelling at a slow speed occupies approximately 11.5 feet when negotiating a curve alignment of 300 feet and approximately 13.5 feet when negotiating a curve of 150 feet radius (representing a sharp curve). The space occupied by the truck takes into account the off-tracking and the swept path of the truck.

1. Given that there would need to be certain shy distance or clearance between the guardrail and the vehicle and clearance between opposing vehicles the lane available width is inadequate and the corridor would be unsuitable for gravel truck traffic.
2. The lack of available line of sight, especially at sharp curves, between approaching vehicle further adds to the corridor's unsuitability for heavy truck traffic from traffic safety and operations point of view.
3. The corridor is on continuous downhill grade from the DNR land until it reaches 240th Avenue. This would require continuous braking action on part of the loaded gravel trucks which in turn would destroy the pavement. Because of the length of the corridor that the loaded trucks will have to trek downhill, it is very likely that drivers will try to conserve on the mechanical braking system and use engine compression to control speed. This will generate loud noise and complaints from the area residents.

CC: Matt Griswold, P.E.; -Traffic Engineering Manager

| 5. Berry Rd: NE 229th Ave to DNR. | | | | | |
|---|---|---|---|---|---|
| | 54640 @ 0.00 | | Intersection with NE 229th St. | | |
| | 54640 @ 0.90 | | Intersection with NE 240th Ave. | | |
| | 54640 @ 0.40 | | Intersection with NE 246th Ct. | | |
| | 54640 @ 1.61 | | Intersection with NE Kaskillah Rd | | |
| | 54640 @ 2.54 | | End of County Rd | | |
| | | | | | |
| Report No | Road No | MilePost | CollisionDate | # of Injuries | Inj Class |
| E184813 | 54640 | 0.01 | 8/1/2012 15:37 | 0 | 1 - No Injury |
| 2737885 | 54640 | 0.26 | 2/26/2010 7:15 | 0 | 1 - No Injury |
| E155883 | 54640 | 1.11 | 2/25/2012 | 0 | 1 - No Injury |
| 3352692 | 54640 | 1.89 | 2/1/2010 12:16 | 1 | 6 - Non Disabling |


22
23
24
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26
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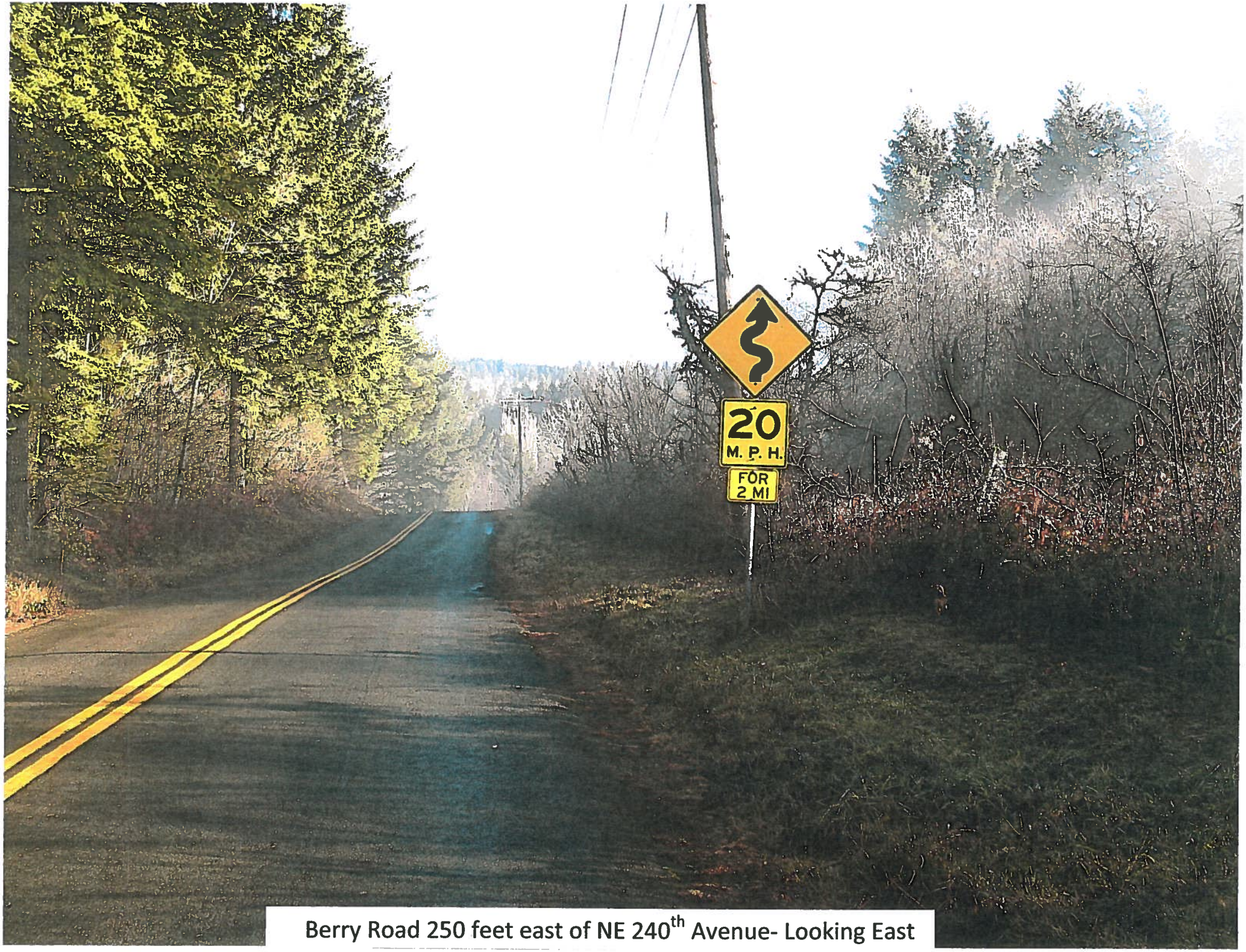
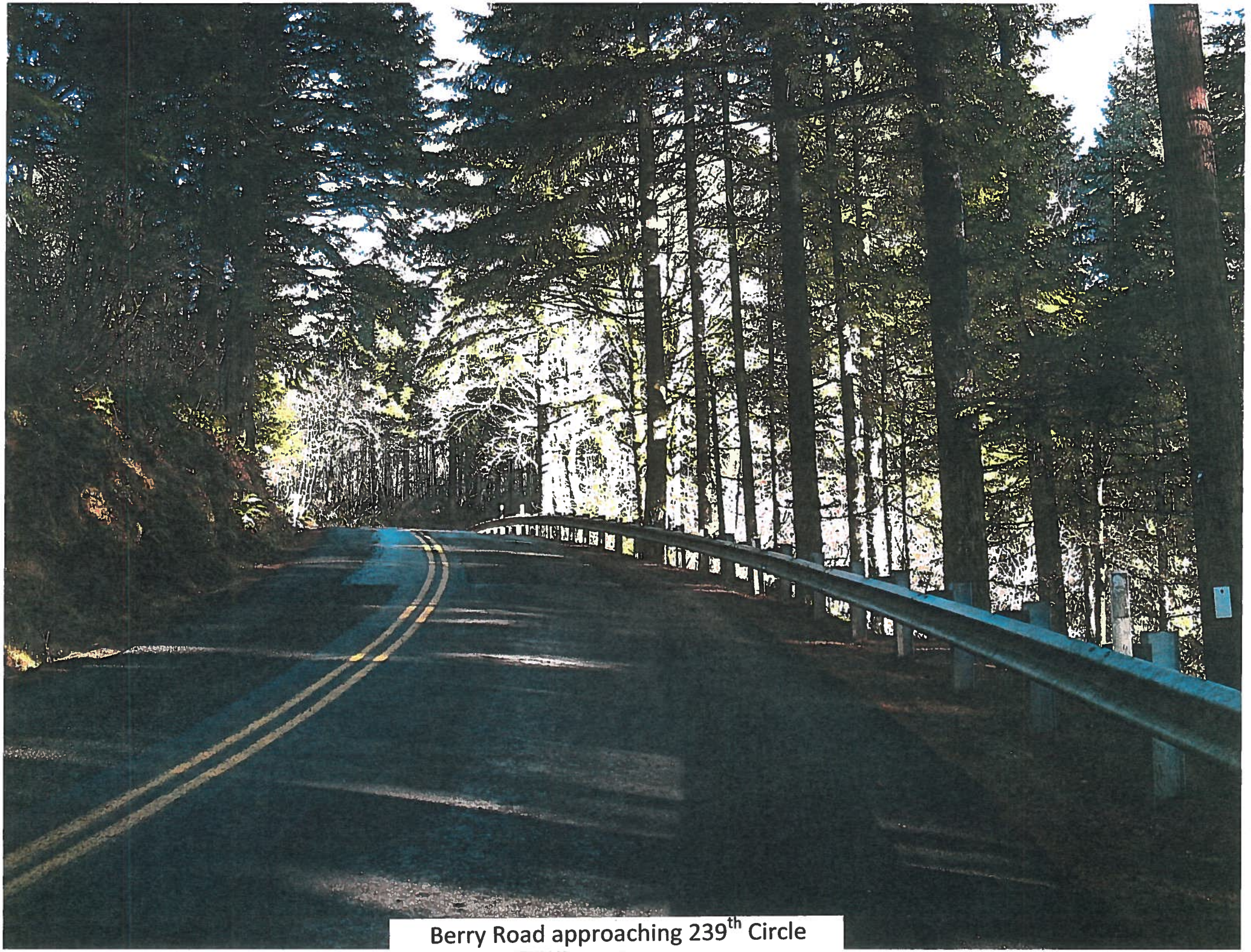
34
35
36
x BELLS MTN
elev 2275
Yacolt Burn
State Forest
SUNSET FALLS RD
ALLWORTH RD
LIBERTY RD
ALVAS ROAD
BERRY ROAD
KASKILLAH DR
236th WAY
264th PL
L1410
SCHAUER RD
BERLIN RD
OSMAN
242nd AVE
237th ST
228th ST
224 ST
219th ST
223rd ST
267th CT
268th AVE
262 AVE
T4N R3E WM
T4N R4E WM
T3N R3E WM
T3N R4E WM
VENERSBORG
214th
246th CT
249th
209th ST
252 AVE
206th
204th ST
OLSON RD
SPOTTED DEER x MTN
elev 1998
VICINITY MAP



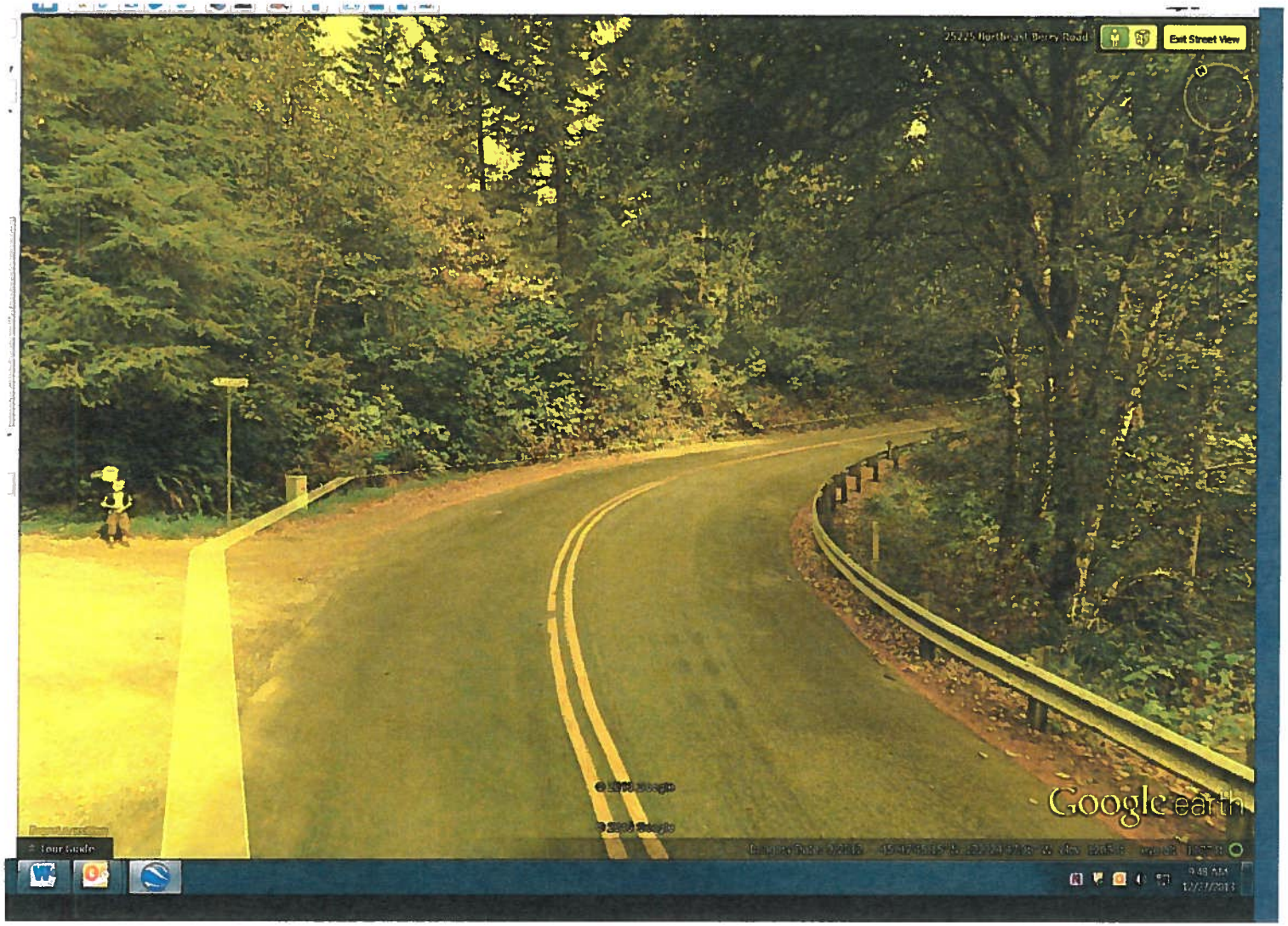

Berry Road 250 feet east of NE 240th Avenue- Looking East

Berry Road 700 feet east of Bell Drive

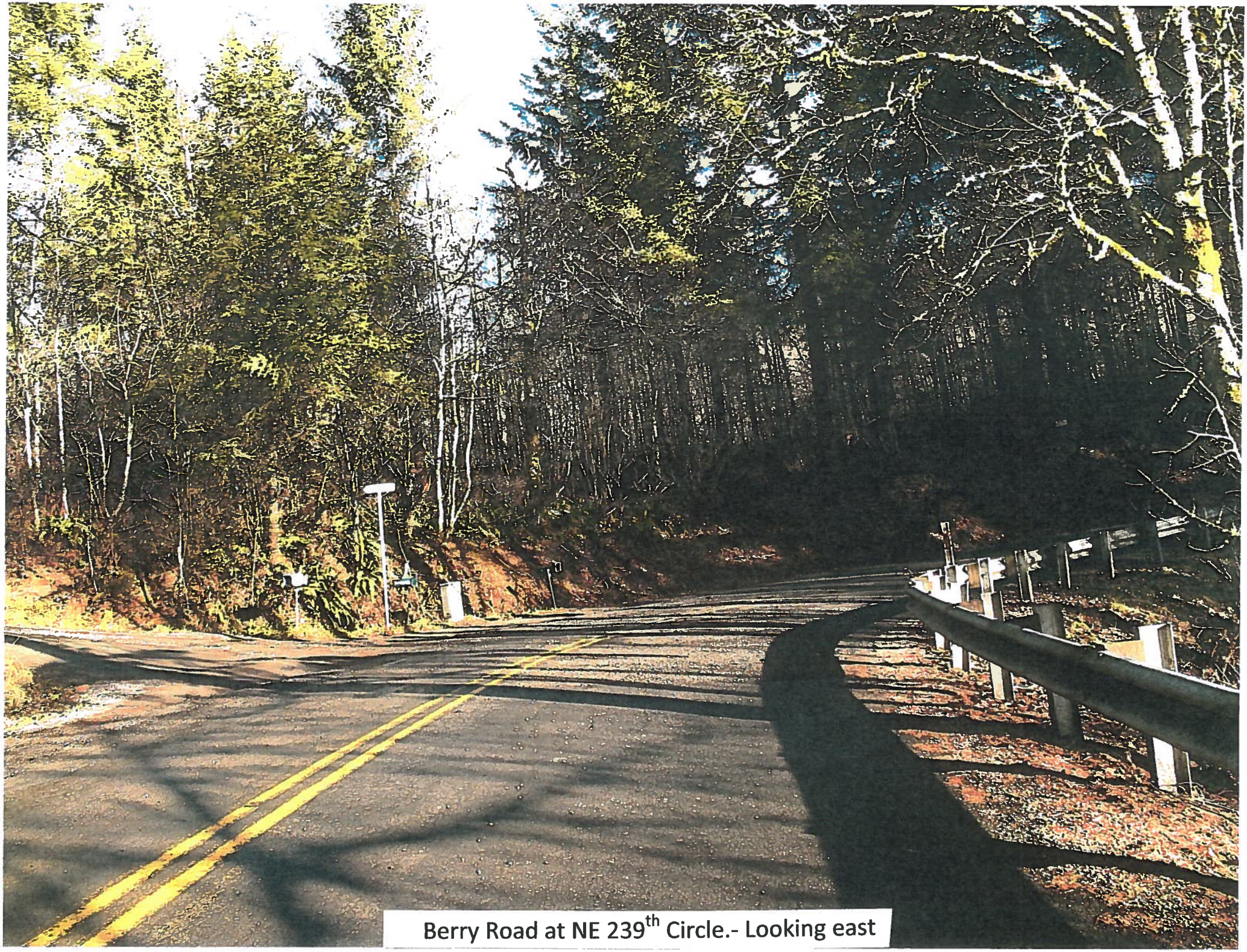

Berry Road – Approximately 900 feet east of Bell Road- Looking East



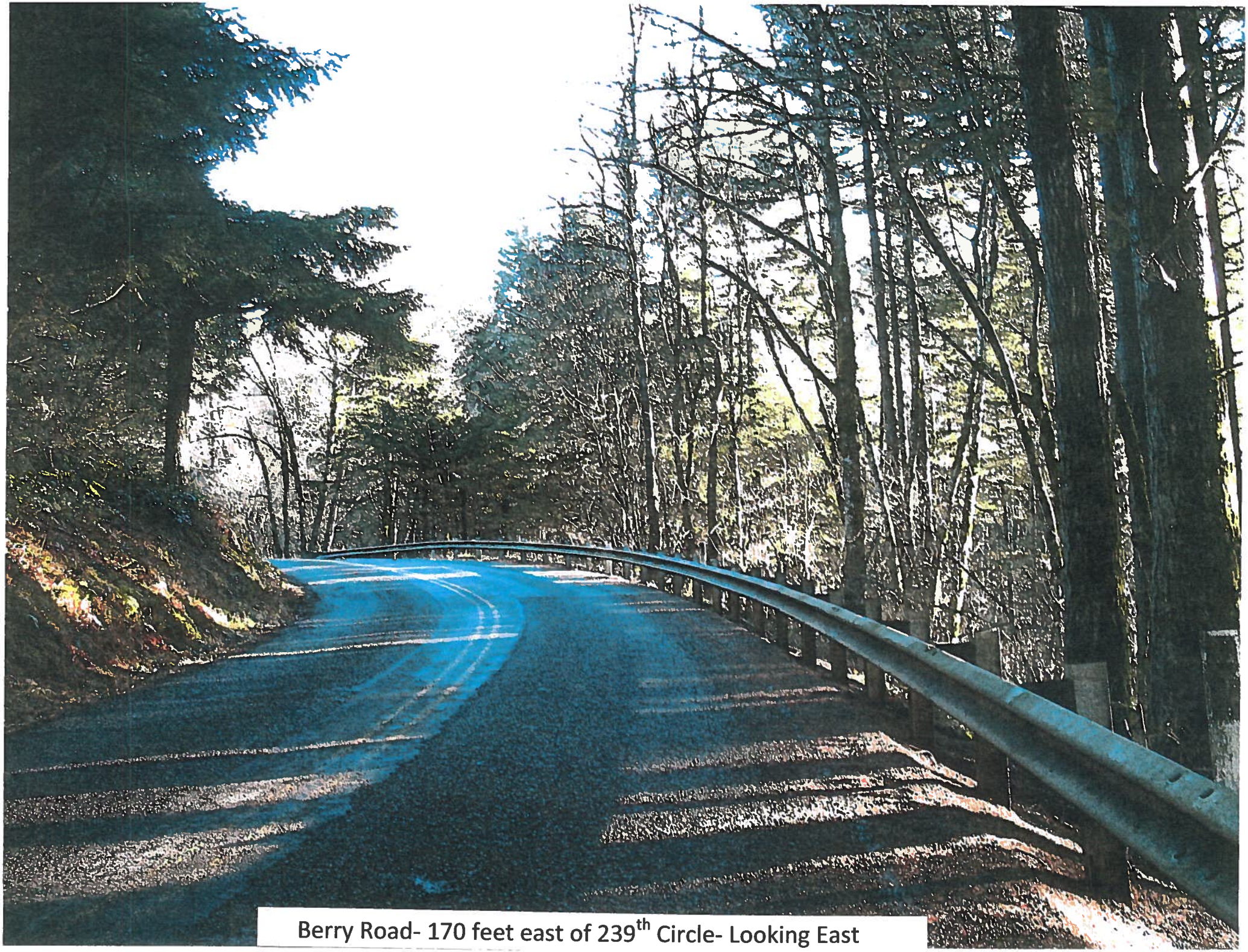
Berry Road approaching 239th Circle




Berry Road at 239th Circle- Looking East- Another example of tight horizontal curve combined with roadway grade and sight distance deficiency.



Berry Road at NE 239th Circle.- Looking east



Berry Road- 170 feet east of 239th Circle- Looking East

Guardrail swiped by passing vehicle

Berry Road East of Kaskillah